

Notice of Allowability

Application No.

09/992,814

Examiner

Sudhanshu C. Pathak

Applicant(s)

SIMMONS, SEAN B.

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 6th, 2005.
2. ☒ The allowed claim(s) is/are 5-7, 10-17, 19-27 & 29-49 and re-numbered as claims 1-41 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted:
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date Sept. 14th, 2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. Claims 5-7, 10-17, 19-27 & 29-49 are pending in the application.
2. Claims 1-4, 8-9, 18 & 28 have been canceled.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph M. Sauer on September 14th, 2005.

- In order to avoid a 35 U.S.C. 112, 2nd Paragraph rejection the claims have been amended as follows:
 - In Claim 5, **after** line 20, **insert**
"wherein 'm' and 'n' are integers"
 - In Claim 10, **after** line 34, **insert**
"wherein 'm' and 'n' are integers"
 - In Claim 19, **after** line 16, **insert**
"wherein 'm' and 'n' are integers"
 - In Claim 29, **after** line 20, **insert**
"wherein 'm' and 'n' are integers"
 - In Claim 31, **after** line 16, **insert**
"wherein 'm' and 'n' are integers"

- In Claim 35, **after** line 29, **insert**
“wherein ‘m’ and ‘n’ are integers”
- In Claim 43, **after** line 17, **insert**
“wherein ‘m’ and ‘n’ are integers”

Allowable Subject Matter

4. Claims 5-7, 10-17, 19-27 & 29-49 and re-numbered as claims 1-41 respectively are allowable over the prior art of record because the cited references do not contain the specified limitation of a communications channel detector for determining the availability of a desired type of communications channel in a communication system having at least one communications channel, the communications channels including data streams comprising a plurality of data symbols, the channel detector comprising: a phase identifier configured to provide a plurality ‘n’ of phase measurements for each of a plurality of consecutive ones of the data symbols comprising one of the communications channels, the ‘n’ phase measurements for any one of the data symbols respectively corresponding to n timing offsets from a centre of the data symbol; a phase comparator coupled to the phase identifier and configured to determine differences between the phase measurements for consecutive data symbols, each of the differences corresponding to one of the n timing offsets and determined between phase measurements corresponding to the one of the n timing offsets, to provide a plurality of phase differences for each timing offset; and a phase correlator coupled to the phase comparator and configured to

determine whether or not the plurality of phase differences for at least one of the timing offsets exhibit a predetermined phase difference profile; wherein the phase identifier is configured to measure the phase of each data symbol at a number 'm' of the n timing offsets, and to estimate the phase of each data symbol at n-m of the n timing offsets, to thereby provide m measured phase measurements and n-m estimated phase measurements as the n phase measurements.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.
 - If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
 - The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak



SHUWANG LIU
PRIMARY EXAMINER

9/15/05